Editorial

NATURE BASED SOLUTIONS IN SOIL HEALTH MANAGEMENT

Restoring the health of degraded agricultural soils and thereby building the resilience of agro-ecosystems to combat the effects of climate change is a long-standing global issue. Soil, being the crucial component for supporting life forms on earth and base of the agricultural food production system any ailment related to soil always becomes the core topic of debate in most of the environment related discussion forums. In recent years, soil health management got a new perspective with the incorporation of the concept 'Nature-based Solutions' (NbS) as a strategy to tackle climate change related challenges faced by the world agri-food system.

Unfortunately, there is no universally adopted definition for NbS hence; there is no clear answer to the question 'what constitutes NbS?' even with those who advocate the approach. In general, NbS in the context of soil health covers a wide range of multifunctional practices such as growing cover crops not only to protect soil but also to make the soil more healthy and fertile to support its flora and fauna so as to ensure healthy plant growth; use of organic fertilizers particularly to reduce green house gas and other emissions associated with both the production and end use of chemical fertilizers; agro-forestry to improve biodiversity and habitat value; bio-remediation for the detoxification of contaminated soils etc. Moreover, NbS related to agriculture can also be a set of actions or policies that support transforming the agro-ecosystem in such a way that it can deliver a wide range of services to the society.

Though NbS are low-cost interventions with lots of environmental benefits, their field level implementation depends upon the interest and motivation of farmers. In a country like India where small and marginal farmers are more in number, financial and other incentives have crucial role in promoting NbS for soil health restoration. Moreover, other than regular financial incentives like agricultural subsidies and crop insurance schemes if farmers are supported with any rewarding system similar to the 'Payment for Ecosystem Services (PES)' practiced by many countries effective implementation of NbS in Indian agriculture can be made possible. In fact, by formulating appropriate laws and regulations policy makers can also ease the efforts of agencies promoting NbS in agriculture.

This issue of HARIT DHARA included articles related to potential of some innovative agricultural technologies such as nano-gypsum, *methylobacterium*, biodynamic methods and regenerative agriculture for soil health management as well as the strength of Information and Communication (ICT) based technologies as a tool to improve agriculture production.

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